

**ABSTRACT OF THE DISCLOSURE**

The invention is directed to therapeutic antioxidant compositions which are enhanced by the stabilized atomic hydrogen; one of the most potent antioxidants. Such products can be used for prophylactic and therapeutic purposes in treatment of cancer, diabetes, autoimmune diseases, neurodegenerative diseases, cardiovascular diseases, skin diseases etc. The products described can be used independently or in combination with other drugs and treatment modalities. The products can also be used as dietetic products to aid in desired weight loss. The described products can also be used to prevent oxidative and free radical damage to food and oxidation-prone industrial products. The invention also describes the methods to produce and stabilize atomic hydrogen and prepare and use such stabilized/encaged atomic hydrogen enhanced antioxidant compositions.